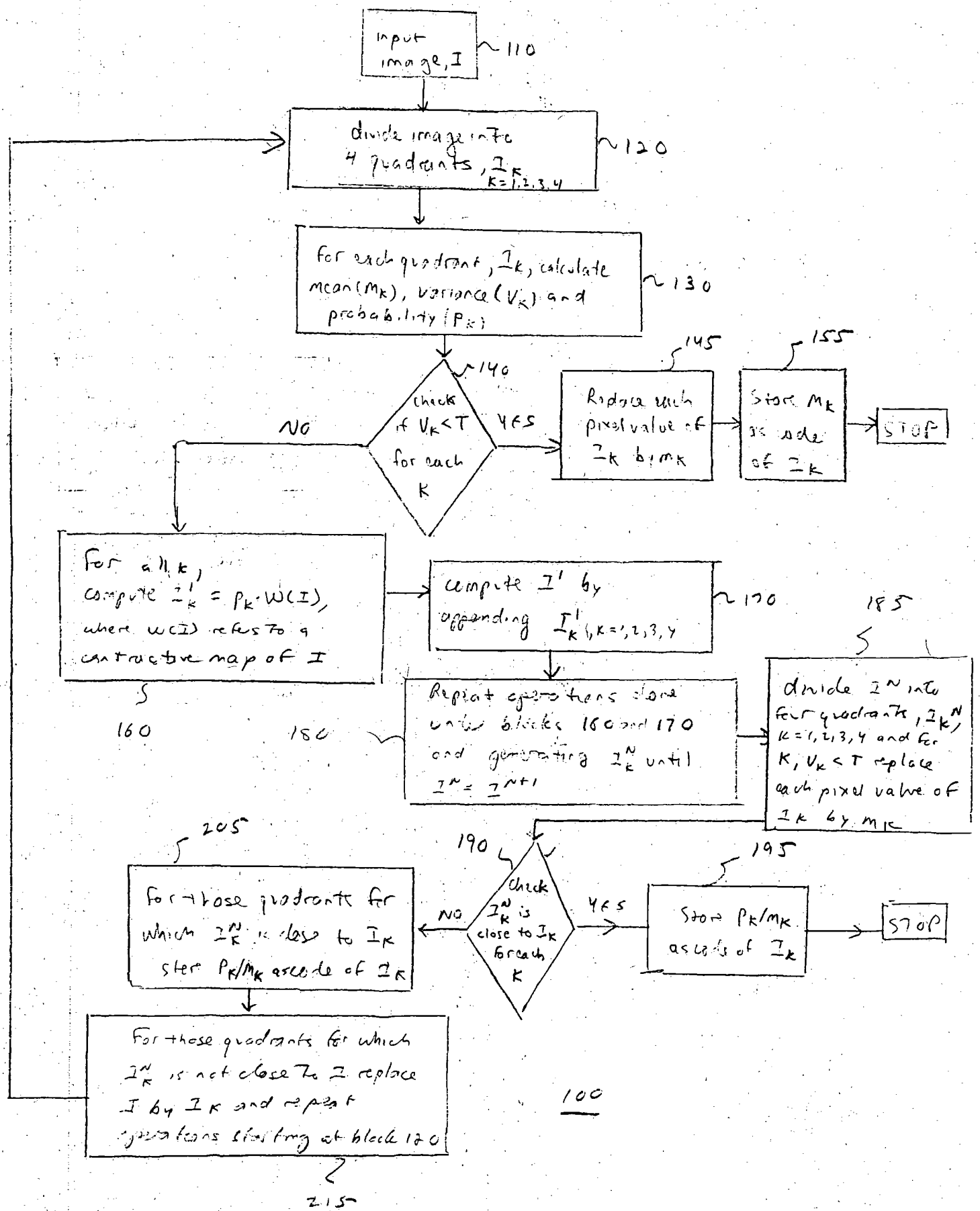
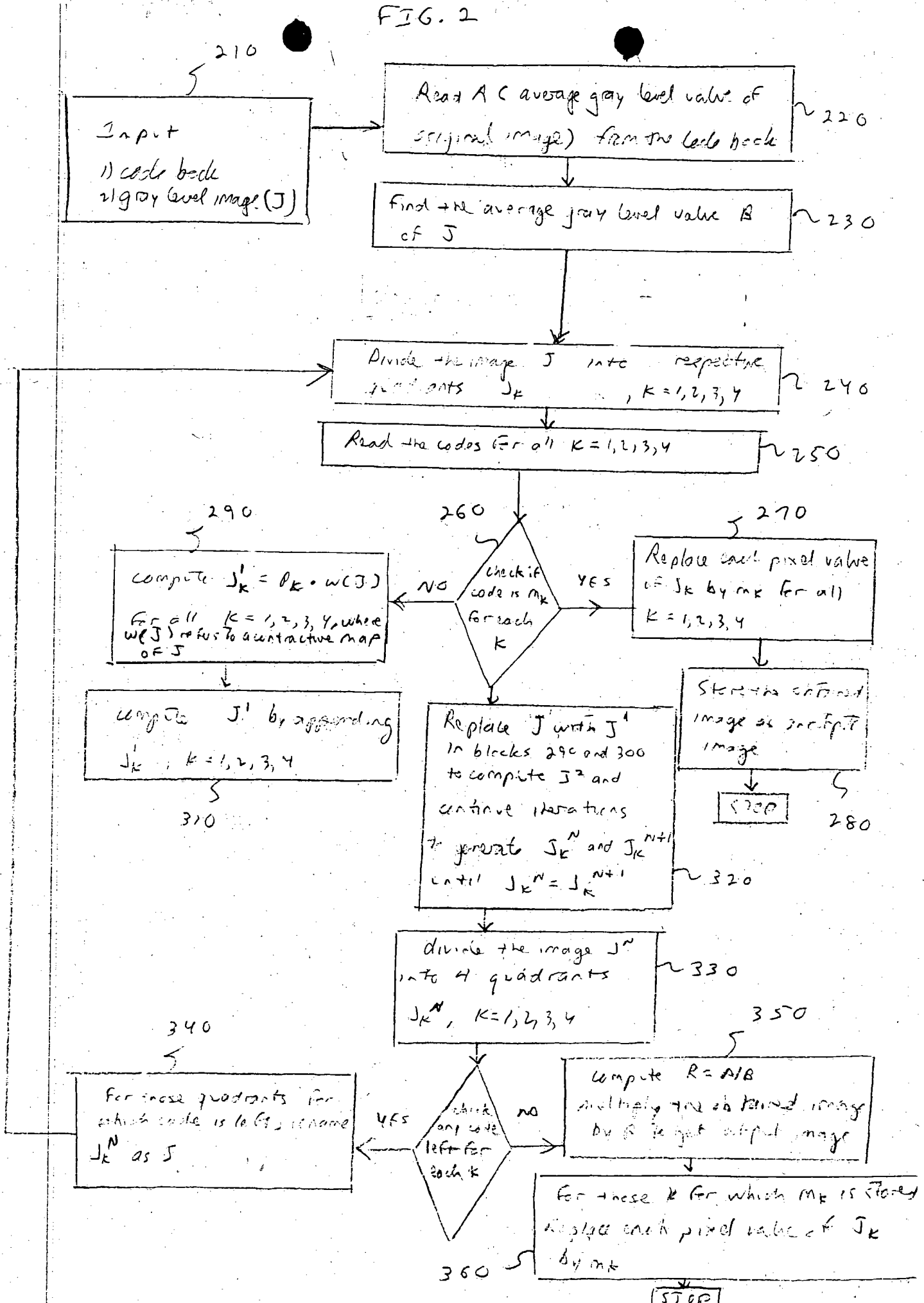

input image, I
110
divide image into 4 quadrants, $I_{K=1,2,3,4}$
120
for each quadrant, I_K, calculate mean (m_K), variance (V_K) and probability (P_K)
130
check if $V_K < T$ for each K
140
NO
YES
145
Replace each pixel value of I_K by m_K
155
Store m_K in node of I_K
STOP
for all K, compute $I'_K = P_K \cdot W(I)$, where W(I) refers to a contractive map of I
160
compute I' by appending $I'_{K}, K=1,2,3,4$
170
Repeat operations done under blocks 160 and 170 and generating I^N_K until $I^N = I^{N+1}$
180
185
divide I^N into four quadrants, I^N_K, K=1,2,3,4 and for K, $V_K < T$ replace each pixel value of I_K by m_K
190
check I^N_K is close to I_K for each K
NO
YES
195
Store P_K/m_K as node of I_K
STOP
205
for those quadrants for which I^N_K is close to I_K store P_K/m_K as node of I_K
For those quadrants for which I^N_K is not close to I replace I by I_K and repeat operations starting at block 120
215
100

FIG. 1

FIG. 2


210
Input
1) code book
2) gray level image (J)
Read A (average gray level value of original image) from the code book
220
Find the average gray level value B of J
230
Divide the image J into respective quadrants J_k, k = 1, 2, 3, 4
240
Read the codes for all k = 1, 2, 3, 4
250
260
check if code is n_k for each k
NO
YES
290
compute $J_k' = \rho_k \cdot w(J)$ for all k = 1, 2, 3, 4, where w(J) refers to a contractive map of J
310
compute J' by appending J_k', k = 1, 2, 3, 4
270
Replace each pixel value of J_k by n_k for all k = 1, 2, 3, 4
280
Store the retrieved image as output image
STOP
Replace J with J' in blocks 290 and 300 to compute J^2 and continue iterations to generate J_k^N and J_k^{N+1} until $J_k^N = J_k^{N+1}$
320
divide the image J^N into 4 quadrants J_k^N, k = 1, 2, 3, 4
330
340
For those quadrants for which code is left, rename J_k^N as J
check any code left for each k
YES
NO
350
compute R = A/B and multiply the obtained image by R to get output image
360
For those k for which n_k is stored replace each pixel value of J_k by n_k
STOP